

## CLAIMS:

1. A device for calibration of a microphone, comprising:  
- a loudspeaker (3) for converting a loudspeaker input signal (5) into sound;  
- a microphone (4) for converting received sound into a microphone output  
signal (16), and  
5 - calibration means for calibrating an output power of the microphone relative  
to a desired power level, said calibration means comprising impulse response estimating  
means (7) for estimating an acoustic impulse response of the microphone by correlating the  
microphone output signal (6) and the loudspeaker input signal (5) when the microphone (4)  
receives the sound from the loudspeaker (3), whereby the output power of the microphone (4)  
10 is estimated.
2. A device according to claim 1 further comprising direct part extraction means  
(8) for extracting a direct part of the acoustic impulse response.
- 15 3. A device according to claim 1, further comprising high and lowpass filter  
means (11) for filtering low and high frequencies.
4. A device according to claim 1, further comprising squaring and summation  
means (13) for creating a representation of a current power level of a diffuse microphone  
20 response.
5. A device according to claim 1, further comprising relating means (15) for  
relating a power level (14) of the diffuse microphone response with a desired power level  
(20).
- 25 6. A device according to claim 5, in which an output (16) of the relating means  
(15) or the averaging means (17) is fed back to the microphone output signal (6) as  
calibration factor (18).

7. A device according to claim 5, whereby the desired power level (20) has a predetermined value for absolute calibration of the microphone

8. A device according to claim 5, comprising a reference microphone (B) for a relative calibration of one or more microphones (A) relative to the reference microphone (B) whereby the output of the squaring and summation means (13) of the reference microphone form the input for the relating means (15) for the other microphones.

9. A device according to claim 3, whereby the high and low pass filter means are combined into a bandpass filter (11).

10. A device according to claim 1, arranged for averaging a calibration factor (16) is averaged.

11. A device according to claim 10, in which the averaging is performed before the calculation of square root of the desired power (20) divided by actual power (14).

12. A method of calibrating microphones, using a device according to claim 1.

SCANNED # 2